

SECTION 084126 - ALL-GLASS ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following scope of Work associated with Base Bid and Tenant Options:
 - 1. Interior all-glass entrance systems (Shell and Tenant).
 - 2. Interior all-glass clerestory systems (Tenant).
- B. This Section includes the environmental goals established by the Government for the project in order to meet the requirements for the LEEDTM certification process.
 - 1. Information in this Section includes specific recycled content and low-emitting material characteristics (VOC limits) identified as requirements.
 - 2. Contractor-provided submittal information for submission by the Government to the U.S. Green Building Council for the LEEDTM certification process is provided in the Base Bid scope of work.
- C. Related Sections include the following:
 - 1. Division 1 Section "LEED Requirements" for additional information concerning LEED and the environmental goals for the project.
 - 2. Division 1 Section "Construction Waste Management" for handling of product rejects, scrap, waste materials, and packing materials.
 - 3. Division 7 Section "Joint Sealants" for joint sealants installed at interface of all-glass systems and other building components.
 - 4. Division 8 Section "Glazing" for glass components incorporated in all-glass entrances.
 - 5. Division 8 Section "Door Hardware" for lock cylinders and access control hardware not specified in this Section. Hardware components are identified in this Section and are to be provided by the all-glass entrance manufacturer.
- D. Options: Refer to Division 1 Section "Options" for additional requirements for the work included in this Section.

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1.3 PERFORMANCE REQUIREMENTS

- A. Provide systems, including anchorage, capable of withstanding loads indicated without structural failure, deflection exceeding specified limit, support components transferring stresses to glazing, and glazing-to-glazing or glazing-to-support contact as determined by structural analysis.
 - 1. Structural Loads:
 - a. Seismic Load: For Interior application.
 - 2. Deflection Normal to Glazing Plane: Limited to 1/175 of clear span or 3/4 inch, whichever is smaller.

1.4 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show fabrication and installation details, including the following:
 - 1. Plans, elevations, and sections for glass system and art glass.
 - 2. Details of fittings and glazing.
 - 3. Hardware quantities, locations, and installation requirements.
 - 4. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
 - 1. Metal Finishes: 6-inch long sections of patch fittings, rails, and other items.
- D. LEED Submittals:
 - 1. Credit MR 4: Manufacturers' product data for all glass systems, including printed statement of Recycled Content - 20% (post-consumer + ½ pre-consumer).
 - 2. Credit EQ 4.1: Manufacturers' product data for sealants and installation adhesive, including printed statement of VOC content.
- E. Project Closeout Submittals:
 - 1. Maintenance Data: For all-glass systems to include in maintenance manuals.
 - 2. Warranty: Sample of special warranty.

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1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain all-glass systems from single source from single manufacturer.
- C. Accessible All-Glass Entrance Doors: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABAAAG Accessibility Guidelines.
- D. Preinstallation Conference: Conduct conference at Project site.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with all-glass systems by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating all-glass systems without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of all-glass systems that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:
 - 1. Structural failures.
 - 2. Deterioration of metals, metal finishes, and other materials beyond normal wear.
 - 3. Failure of operating components to function normally.
- B. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: The design for all-glass systems is based on Insulite Glass Co., Inc; 7800 Frontier Circle, Olathe, Kansas 66061; Contact: Craig McLain 913.780.2233, Mobile 913.208.6168. The design for the pull hardware is based on hardware manufactured by Blumcraft of Pittsburgh. Additional hardware requirements as identified in Article 2.4. Subject to compliance with requirements, provide the named product or a comparable product by:

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1. ACI Distribution.
2. Blumcraft of Pittsburgh.
3. Guardian Industries Corp./Float Glass Division.

2.2 MATERIALS

- A. Glass: Refer to Division 8 Section “Glazing” for glass components and glazing accessories.
1. Custom art glass will be supplied to Skyline Design for application of custom patterns, and will be delivered to all-glass door manufacturer for hardware installation. Refer to Division 8 Section “Glazing” for contact information.
- B. Aluminum: ASTM B 221, with strength and durability characteristics of not less than alloy 6063-T5.
- C. Stainless-Steel Cladding: ASTM A 666, Type 302 or 304.


2.3 COMPONENTS

- A. Patch Fittings: Stainless-steel-clad aluminum.
- B. Sidelight Channels: Recessed continuous head channels for door and sidelight. Cut channel for glazing sidelight panel, match fitting-metal finish, unless otherwise indicated.
- C. Bottom Door Rails: 3-3/8 inch, square shoulder full rails.
- D. Bottom Sidelight Channel: 3-3/8 inch, square shoulder full rails. Align with bottom door rails.
- E. Accessory Fittings: Match patch fitting metal and finish for the following:
1. Header: 2” x 4-5/8” continuous over door and sidelight. Cut header for glazing sidelight panel.
 2. Overhead doorstop.
 3. Recessed Header continuous over door and sidelight. Cut recessed header for glazing sidelight panel.
- F. Recessed Header and Sill Channel (Sidelights and Clerestory for Tenant only): 1-3/4 inch stainless steel recessed head channel and 1 inch recessed sill channel as indicated on the drawings.
- G. Anchors and Fastenings: Concealed.

2.4 HARDWARE

- A. General: Heavy-duty hardware units in sizes, quantities, and types recommended by manufacturer for all-glass entrances indicated. For exposed parts, match fitting metal and finish.

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- B. Concealed Overhead Closers and Bottom Floor Pivots: BHMA A156.4 and BHMA A156.8, Grade 1; including overhead concealed, barrier free, header mounted door stop, pivot, and accessories required for complete installation.
1. Swing: Single acting pair or single acting as indicated in the Shell and Tenant Option door schedules.
 2. Closer: Overhead concealed (barrier free). Comply with requirements of authorities having jurisdiction or the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ABAAG)," whichever are more stringent.
 - a. Product: Dorma RTS-88 BFI; as specified for hardware sets indicated in Division 8 Section "Door Hardware."
 3. Maximum Opening Force:
 - a. Interior Doors: 5 lbf.
 4. Header-Mounted Doorstop:
 - a. Product: C.R. Laurence Co. Inc.; "INT307BS," brushed stainless steel header mounted single door stop on continuous header, or Blumcraft ES-100 door stop. Door stops are provided as specified for hardware sets indicated in Division 8 Section "Door Hardware."
 5. Top Door Patch:
 - a. Product: Dorma PT22; as specified for hardware sets indicated in Division 8 Section "Door Hardware."
 6. Bottom Pivot: Surface-applied center pivot by all-glass door manufacturer.
 7. Electric Strike:
 - a. Products: Folger-Adams 310; as specified for hardware sets indicated in Division 8 Section "Door Hardware."
- C. Push-Pull: Pull at full height for Shell all-glass entrances. Pull is 7'-2" high to align with adjacent wood for Tenant all-glass entrances at "Streets."
- a. Products: Blumcraft DB-130-F with interior deadlock housing, or Blumcraft DH-130-F without deadlock. Push-pulls are provided as specified for hardware sets indicated in Division 8 Section "Door Hardware."
-  "b. Provide comparable products as manufactured by C.R. Laurence Co., Inc."
- D. Cylinders: As specified for hardware sets indicated in Division 8 Section "Door Hardware."
- E. Control Access Hardware: As specified for hardware sets indicated in Division 8 Section "Door Hardware."

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- F. Floating Transom Components: Basis-of-Design is the Blumcraft "Floating Transom System;" transom glass is supported by the transom bar and small, stainless steel rods concealed in the vertical joints between the transom glass and adjacent surfaces.
 - 1. Door Openings Below Floating Transoms: Provide the hardware components as specified for hardware sets indicated in Division 8 Section "Door Hardware."
- G. All-glass doors scheduled with card access or electric strikes will be connected to Government-provided / Government-installed Card Reader Security System.

2.5 FABRICATION

- A. Provide holes and cutouts in glass to receive hardware, fittings, rails, and accessories before tempering glass. Do not cut, drill, or make other alterations to glass after tempering.
 - 1. Factory-assemble components and factory install hardware to greatest extent possible.

2.6 STAINLESS-STEEL FINISHES

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Remove tool and die marks and stretch lines or blend into finish.
 - 2. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- B. Stainless-Steel Finish: No. 4, Satin Finish. Match Architect's Sample.
- C. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install all-glass systems and associated components according to manufacturer's written instructions.

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- B. Set units level and plumb.
- C. Maintain uniform clearances between adjacent components.
- D. Lubricate hardware and other moving parts according to manufacturer's written instructions.
- E. Set, seal, and grout floor closer cases as required to suit hardware and substrate indicated.
- F. Joints between sidelight panels are to align per drawings and be ¼ inch space.
- G. Coordinate floor-mounted items with finish flooring installation.

3.3 ADJUSTING AND CLEANING

- A. Adjust doors and hardware to produce smooth operation and tight fit at contact points and weather stripping.
- B. Remove excess sealant and glazing compounds and dirt from surfaces.
- C. Repair or replace damaged or defective hardware components.

END OF SECTION 084126

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